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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,022	01/11/2001	Paola Carrai	IT 000001	2188

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Corporate Patent Counsel
U.S. Philips Corporation
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EXAMINER

MCCARTNEY, LINZY T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,022

Applicant(s)

CARRAI ET AL.

Examiner

Linzy McCartney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.05(c).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "...a text color is **fewer present** than a background color." It is unclear how one color can be "fewer present" as compared to another color. In the subsequent art rejection, the Examiner has interpreted "fewer present" to mean "fewer in number".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,067,070 to Suzuki et al. (Suzuki).
 - a. Referring to claim 1, Suzuki discloses detecting text in an image (column 7, lines 53-57); and scaling the image to adjust first numbers of pixels per line and lines per

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image of the image to second numbers of pixels per line and lines per image that fit with a display on which the image is to be displayed (column 7, line 58 – column 8, line 58); and Suzuki discloses processing the image in dependence on a result of the text detecting step (column 7, 53-57)

b. Referring to claim 7, Suzuki discloses a device for text improvement (Fig. 2) including means for detecting text in an image (column 7, lines 53-57); and means for scaling the image to adjust first numbers of pixels per line and lines per image of the image to second numbers of pixels per line and lines per image that fit with a display on which the image is to be displayed (column 7, line 58 – column 8, line 58); and Suzuki discloses means for processing the image in dependence on a result of the text detecting step (column 7, 53-57)

c. Referring to claim 8, Suzuki discloses a device for text improvement as claimed in claim 7 (see rejection of claim 7 above) and a display (Figure 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki as applied to claim 1 further in view of U.S. Patent No. 5,956,468 to Ancin

a. Referring to claim 2, the method of Suzuki as applied to claim 1 above meets the limitations recited claim 2 except Suzuki does not explicitly disclose wherein the detecting step comprises setting a background color to white and a text color to black, and the processing step comprises the step of setting white back to the background color and black back to the text color. Ancin discloses the detecting step comprises setting a background color to white and a text color to black (column 11, lines 26-28) and the processing step comprises the step of setting white back to the background color and black back to the text color (Abstract). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the method of Suzuki with the teachings of Ancin. The suggestion/motivation for doing so would have been to produce a mixed color document with clear, sharp text characters in the text region of the document and relatively high quality images in the image region of the document (Patent No. 5956468, column 1, lines 25-28).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki as applied to claim 1 above further in view of U.S. Patent No. 6,038,340 to Ancin et al. (Ancin) further in view of U.S. Patent No. 5,956,468 to Ancin.

a. Referring to claim 3, the method of Suzuki as applied to claim 1 above meets the limitations recited in claim 3 except Suzuki does not explicitly teach the step of determining whether a text color is fewer present than a background color. As noted above, the phrase "fewer present" is indefinite and the Examiner is interpreting the aforementioned phrase to mean "fewer in number"). Ancin discloses determining whether a text color is fewer in number than a background color (column 1, lines 61-66).

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At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the method of Suzuki with the teachings of Ancin. The suggestion/motivation for doing so would have been to determine whether the image block contains a sufficient number of black and white pixels to classify the block as having relatively black text on a relatively white background (Ancin, column 1, lines 60-66) which determines the type of processing to be performed on the image (Patent No. 5956468, column 12, lines 52-62 and Fig. 4).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki as applied to claim 1 above and further in view of U.S. Patent No. 6,148,102 to Stolin.

a. Referring to claim 4, the method of Suzuki as applied to claim 1 above meets the limitations recited in claim 4 except Suzuki does not explicitly disclose the step of determining a region for which it holds that the number of colors does not exceed 2.

Stolin discloses the aforementioned limitation (column 1, lines 29-33). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the disclosure of Suzuki with the teachings of Stolin. The suggestion/motivation for doing so would have been to recognize text characters in a multicolor image (Stolin, column 2, lines 10-15).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki as applied to claim 1 above in view of W.W. Cindy Jiang, "Thresholding and Enhancement of Text Images for Character Recognition" (Jiang) further in view of U.S. Patent No. 5,781,658 to O'Gorman.

a. Referring to claim 5, the method of Suzuki as applied to claim 1 above meets the limitations recited in claim 5 except Suzuki does not explicitly disclose subjecting a

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scaled image to a thresholding operation. Jiang discloses the aforementioned limitation (page 2395, column 2, paragraph 7). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the method of Suzuki with the teachings of Jiang. The suggestion/motivation for doing so would have been because thresholding can realize an image that can be efficiently stored for future access and reading (O'Gorman, column 1, lines 61-63).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki as applied to claim 1 above further in view of Jiang.

a. Referring to claim 6, the method of Suzuki as applied to claim 1 above meets the limitations recited in claim 6 except Suzuki does not explicitly disclose the step of subjecting the scaled image to a morphological filtering. Jiang discloses the aforementioned limitation (page 2396, column 1, paragraph 2). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the method of Suzuki with the teachings of Jiang. The suggestion/motivation would have been to smooth character boundaries (Jiang, page 2396, column 1, paragraph 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Linzy McCartney** whose telephone number is **(703) 605-0745**.

The examiner can normally be reached on Mon-Friday (8:00AM-5:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose
telephone number is (703) 306-0377.

ltm
March 26, 2002



MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600